The Public's Health and the Law in the 21st Century

5th Annual Partnership Conference

Concurrent Session

Science and the Law of Toxics

Tuesday, June 13, 2006
10:30-12:00 pm

Moderator: Doug Farquhar, JD, Program Director for Environmental Health, National Conference of State Legislatures, Denver, CO

Panel: Hon. Phyllis Kahn, PhD, MPA, Minnesota State Representative, St. Paul, MN; and Chair of the Section on General Interest in Science and Engineering, American Association for the Advancement of Science

Thomas Sinks, PhD, Deputy Director, National Center for Environmental Health/Agency for Toxic Substances and Disease Registry, CDC, Atlanta, GA

Wendy E. Wagner, MES, JD, Joe A. Worsham Centennial Professor, University of Texas School of Law, Austin, TX

Session Purpose:

Using toxics as an example of ways in which scientific information may be presented, and occasionally manipulated, by competing interest groups, the panel will suggest criteria lawmakers can apply in identifying legitimate scientific information; distinguish between scientific and legal decision-making; communicate scientific information to policy makers effectively and accurately.

Dr. Thomas Sinks will present the epidemiology of toxics, and suggest ways to identify reliable sources of scientific information.

Rep. Phyllis Kahn will use her extensive background as a former researcher in genetics and cell biology, and her extensive experience as a state lawmaker, to outline the practical considerations that come into play in policy-making with regard to limiting exposure to toxics. She will also discuss how to integrate sound science into the public policy making process.

Professor Wendy Wagner will discuss ways in which interested parties can distort science and recommend approaches policy makers can take to identify sound scientific information about health threats and prevention strategies.

Learning Objectives:

By the close of this session, conference participants will be able to:

• Describe the impact of the *Daubert* ruling on regulatory/legislative decision-making;

• Discuss differences and similarities between scientific and legal decision-making processes; and

• Identify practical approaches health policy makers can take to locate sound scientific information.

Session Convener:

The Public Health Law Program, CDC, and the National Conference of State Legislatures

Resource Materials:

Daubert v. Merrell Dow Pharmaceuticals, 509 U.S. 579 (1993).

David Michaels, Doubt Is Their Product, Scientific American 96 (June 2005).

David Michaels and Wendy E. Wagner, Disclosure in Regulatory Science, 302 Science 2073 (Dec. 19, 2003).

Roni A. Neff and Lynn R. Goldman, Regulatory Parallels to *Daubert*: Stakeholder Influence, "Sound Science," and the Delayed Adoption of Health-Protective Standards, 95 S1 American Journal of Public Health S81 (2005).

Wendy E. Wagner, The Perils of Relying on Interested Parties to Evaluate Scientific Quality, 95 S1 American Journal of Public Health S99 (2005).

Lessons Learned:

1. Rep. Phyllis Kahn:
   Government uses science and even appreciates its need for science, but the basic principles of running government come from people trained in law with little understanding of the scientific method and thought processes. The political-legal mind makes a decision even with inadequate data and will sometimes settle for ideology, a comparison of alternatives, political acumen or even "gut reaction." The situation becomes more complicated for the politician confronted with conflicting scientific advice. But, even if policymakers can distinguish sound science from junk science, they will also want to factor social, economic, financial, logistical and political information into their decision process. Scientists do not like to hear that just because scientific evidence is sound it may not necessarily determine policy directions. The scientific and industrial establishments have delivered the message that scientific and technological advances have built the American way of life. Yet we realize we face serious problems in maintaining our way of life, specifically in the area of the problems of toxics, while continuing to enhance economic development and maintain international competitiveness. Despite some disillusionment, indications are that the public retains great faith in science and technology and still naively believes that technological fixes can be found for almost all of the ills of the world. The imposition of public controls on science and technology must be done within a democratic social ethic. This means by lawyers, scientists, engineers, farmers,

government officials and academics. There is an enormous job in both mutual education and translation on our hands.

2. Wendy E. Wagner:
The high stakes involved in regulatory decisions and toxic tort litigation create strong incentives for affected parties to invest in distorting, suppressing, and launching illegitimate attacks on research that is adverse to their interests. The high stakes also lead to dramatic disagreements among affected parties about how scientific studies should be extrapolated to larger policy questions about the stringency of environmental regulation. Even though these disagreements may be couched as "battles of the experts," they are in truth disagreements about the implications of a particular study for public policy, such as whether to be risk averse in regulating a substance known to cause cancer in mice.

As a result of the strong incentives for distorting science, policymakers must be vigilant in sorting the junk science (and the junk attacks) from legitimate and credible research. Several promising techniques have emerged to assist in this process. One expensive and time-consuming approach, but also one of the most reliable, is to empanel carefully selected science advisory boards (like the National Academy of Sciences) to provide scientific consensus views to policy makers. A second approach, borrowed from scientific journal editors, is to require conflict disclosures from researchers and commenters that identify whether they are operating under contract with an affected party. Finally, in evaluating debates over regulatory science, policymakers should remain skeptical about whether the debate is in fact over science or instead concerns how to extrapolate existing, limited research to public health protection policies and thus should be resolved by accountable officials.